

Thermal Protection Materials and High Temperature Composites for Planetary Entry Systems

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The Boeing Company has a long history in developing Thermal Protection Systems (TPS) and designing and constructing high temperature aerostructures. Many space projects ranging from the first manned Mercury and Gemini missions through Apollo and continuing on with the Space Shuttle have been enabled through advanced research and development efforts. Currently advanced materials and construction techniques are being developed for applications beyond earth manned missions to include missions to Mars, the outer planets and their moons. This poster will present an overview of the various TPS Materials and High Temperature Composite structures currently in development and what their intended mission design performance requirements are.